

AMERICAN VETERINARY REVIEW,

APRIL, 1892.

EDITORIAL.

ACTINOMYCOSIS.—In anticipation of our expected inability to be present at the great Peoria trial, and anxious to lay before our readers an accurate report of the proceedings, with the views and opinions of the professional witnesses, and the legal ending of the case, one of our co-editors was commissioned to prepare a general brief of the proceedings for publication in the REVIEW. Dr. Williams accepted the task, and subsequently furnished us the article which appeared in our January issue. We have since then received from another of our colleagues on the editorial staff, Dr. Schwarzkopf, who was one of the witnesses in the case, a criticism upon the editorial of Dr. Williams, and a long article on the subject of actinomycosis besides, which will be found in another part of the present number; and we here append the critique of Dr. S., thus laying both sides of the story before our readers. In the article on actinomycosis the author expresses, perhaps a little too confidently, the hope of a change in our views from those which were propounded in our letter to the Live-Stock Commissioner, but on this point we can only say that while our examination of recent authorities on the subject may have somewhat modified our estimate of the force of certain objections which we have conceived to be valid, we are not yet firmly convinced, and must wait for more weighty evidence of the fallacy of our impressions before abandoning the position which we have heretofore maintained. The first communication of Dr. Schwarzkopf is in the following terms:

THE OTHER SIDE OF THE STORY.

"*Audiat et altera pars*" is an ancient Roman judicial principle. The truth of this was never more apparent to me than when I read the report of the Peoria trial on actinomycosis, as given by Dr. W. L. Williams. It is a masterpiece of misconception. While the expert witnesses of the plaintiff are pictured very much like fools, those of the defendants seemingly overflow with wisdom. But neither is correct, for certainly both sides have given valuable testimony on scientific points.

Elsewhere in this volume will be found a synopsis of my views on the question of actinomycosis, which relieves me here of a reply on that part. But I cannot refrain, in consequence of Dr. Williams' remarks, to give my impression of the representatives of the Illinois Live-Stock Commission—the bearing of some of them in court while I was there was decidedly objectionable and ungentlemanly. The Secretary of the Board would constantly sneeze and laugh while I was on the stand; it was all fun with him; he ostensibly knew all about actinomycosis. The ill-feeling that was shown to men testifying on the other side of Board was notoriously offensive. They took the trial as a question of life and death with them, and not as a matter of scientific dispute. If such be the *personnel* with which our State veterinarians are surrounded in their daily business, great reforms will be needed to free our colleagues from the ban of such injurious political appendices.

The violent attack of Dr. Williams upon Dr. Hickmann I leave the latter to take care of. However, should he not reply, I shall in a later issue of the REVIEW take a stand against some of Dr. Williams' erroneous utterances in regard to the effect which a moderate view of actinomycosis, as held by Dr. Hickmann, might have on international meat inspection.

OLOF SCHWARZKOPF.

ANTI-RABIES INOCULATIONS.—In the editorial department of our March number we gave expression to our views upon the prophylaxy of many contagious diseases of animals by this form of treatment, referring, as the ground of our argument, to the results which had been obtained, or were claimed by various experimenters. Among them, we alluded to those which had been made by Dr. Billings, in the prophylaxy of hog cholera. A reference to our remarks on that occasion will remind our readers that we neither affirmed nor endorsed the results stated by the doctor, but characterized them, in the language of the author himself, as simply "claims."

We have received from the worthy Chief of the Bureau of Animal Industry, Dr. E. Salmon, a communication in relation to the alleged success of Dr. Billings, with a request to find a place for it in the REVIEW. Our columns are always open

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to contributors upon any subject of interest to veterinarians, and our friend Dr. Salmon knows very well that nothing would give us more pleasure than to receive more frequent communications from his brilliant staff, for the edification of the readers of the REVIEW. But in the present case we regret that we cannot comply with his request for the only reason that having declined to print a portion of the articles offered to us by Dr. Billings, on the affirmative side of the controversy, it would hardly comport with the spirit of fair play to admit the argument of the negative side of the contention, or aid one side to speak while condemning the other to silence.

What reason can there be for any other course on our part? We are far from being influenced by any feeling of disrespect for either party; both are hard-working veterinarians, and though they differ on the subject in question, as in others, we feel persuaded that neither has pursued the course that would be the best and wisest in the premises. In the publications of both we find statements based on reports of gentlemen who do not seem to us to be sufficiently qualified to conduct the necessary tests, for we believe that the only possible way for the settlement of the questions in contention, and which will put them at rest upon positively professional grounds, is to have the necessary experiments made, watched, recorded and thoroughly authenticated and consummated by veterinarians alone. This, we believe, is the mode of procedure which was put in practice to decide professionally upon the means of prophylaxy suggested for other contagious diseases, and why should there be a deviation from this course in the present case?

The United States Veterinary Medical Association has funds lying unused in its treasury, and we respectfully suggest the appointment of a committee to institute and supervise the experiments which may be necessary on a certain number of hogs, and to report the result fully and finally. Can the Association make a better use of its unprofitable accumulating capital? Is not such an undertaking in the direct path of its work, and if not, what, in fact, is the purpose of its being?

ORIGINAL ARTICLES.

THE COMMITTEE-REPORT ON MEAT INSPECTION AND
ACTINOMYCOSIS.

BY OLOF SCHWARZKOPF.

When I presented to the United States Veterinary Medical Association at the Chicago meeting, in 1890, a paper on the then undiscussed subject of meat inspection, I endeavored to embody my practical experience of the matter in a concise and systematic form.

Dr. W. L. Williams, Chairman of the Special Committee on Meat Inspection for 1891, brought forth a lengthy report at the national meeting at Washington in September last, in which he adversely criticises portions of my paper. It must be admitted that he produces some new and interesting points, for which he should be thanked; but he also makes some confusion, throwing things to the right and left in his peculiar way, and then leaves me to straighten them out again.

Knowing that I would be prevented from attending the last meeting in Washington, I tried hard to convince him of his mistakes, and I had the impression from his last letter that we were coming nearer to an agreement in some important points, and that the report to the Association would be unanimous. However, he has preferred to forward his original ideas, and hence this explanation.

Passing his introductory remarks, Dr. Williams acknowledges that he is in full accord with the principles of meat inspection as laid down in my paper, except in two instances. Firstly, he finds fault with the classification of diseases for the practice of the sanitary veterinarian, and suggests a somewhat new classification, which he calls scientific. Laudable as is such an effort, he has failed to give us anything better. A classification of diseased meats of the slaughter animals according to their degree of peril for the human consumer is not a dream of sanitarians, and similar attempts (Schmidt, Muhlhelm, etc.,) have proven a failure in practice. Dr. Williams

shows that he has no comprehension of the difficulties that will confront the practical sanitarian in the slaughter-house, if he should be called upon to decide by the principles of so theoretic a system; he evidently overlooks the lack of our knowledge as to the degree of danger in far the larger number of animal diseases in relation to man as a consumer of animal food, and the great diversity of opinion on this question, based on observation and experiments of our authorities on public hygiene.

A scientific classification should be based on facts only, and as Dr. Williams can show no facts for the whole of his system, he naturally leaves a large number of diseases to be decided upon by mere guess-work and imagination. This is clearly seen under his class B, where he places "the flesh of animals which *may* contain chemical substances, which, when ingested, *may* produce serious constitutional disturbances." And under class C, "diseases produced by micro-organism, which also produce chemical poisons, which, when consumed, *may* produce toxic effects." I do not see how Dr. Williams is going to discover these chemical poisons in the slaughter-house. Besides the impracticability of his system, it cannot, therefore, be called scientific.

The classification I offered was not my own make. It is the one generally adopted in Germany, and has grown up from established facts and in conformity with practical principles. It has often been admitted that it has its faults, and I myself said so in my paper (on page 3), "This tabulation of diseases may serve for general purposes until through further research certain diseases are better understood; there will occur cases which will not fit into this classification; neither can any classification or direction as yet be made that will be a complete guide in all cases."

The other and far more important difference of opinion is as to whether actinomycosis is a contagious disease or not. On page 538 (October, 1891) of this journal, Dr. Williams gives a definition of contagion that is unnatural and strained; he also thinks that the word has changed its meaning since the bacteriological epoch of medicine. I differ with Dr. Wil-

liams. Contagion means to-day what it did two hundred years ago, namely, that a healthy animal must come in contact with a diseased animal to contract a particular disease, i. e., the origin of one disease is from the same disease of another living animal. This may be a rough definition, but it is practical, and no elaborate wording or laboratory wisdom can make it clearer or better. I am well aware that there is some confusion in regard to the term contagious in the English-speaking countries, and I believe that the cause of it—at least in the veterinary profession—is largely due to our worthy Principal Williams, of Edinburgh, who attempted to classify contagious and non-contagious diseases in his standard work on the Principles of Veterinary Medicine. But there are surely yet, as before, contagious and infectious diseases, and our great pathologists still apply both terms in a well-defined way. There are instances where it is almost impossible to say whether a disease is contagious or infectious, but that is no ground for abandoning one term where both can be used with advantage in a majority of cases. If the word contagious is used alone it becomes necessary to apply some adjective in order to define more clearly the character of a disease, hence the invention of the terms “highly contagious” and “dangerously contagious” which are really alarming terms, and which I saw first in that “highly sensational” pamphlet of the Illinois Live-Stock Commission, in which Dr. Williams occupied a prominent place.

Next Dr. Williams attempts to show that actinomycosis is a contagious disease. He enumerates several clinical observations where “inter-transmission apparently played a very important role.” He recites cases seen by him and Dr. Casewell, and finds these and others “strongly suggestive.” But that is the most he can say, and he is unable to introduce any positive evidence that could bring the much wanted light in this important direction. Then he recalls the experiments of successful inoculation with actinomyces, which are well known to the student of actinomycosis; he does not mention, however, the far more numerous instances where inoculation was a total failure, avoiding hereby the consequences which do not fit into his theory.

Dr. Williams in the above arguments in favor of the contagiousness of actinomycosis takes as granted certain premises which will not be accepted by everyone. The interpretation of the Peoria cases, where "the extension of the disease *seemed* due to the fact that badly affected animals were kept in the sheds with the healthy" (page 541, this journal), can reasonably be disputed. Dr. Williams concludes that here inoculation took place from the purulent discharge of the actinomycotic abscesses containing actinomyces. Others, however, will believe that the cattle were exposed to a common cause, and that here the actinomyces adhered either to the grain, or to the "very coarse, hard wild hay" that he mentions as being fed, which explanation is far more probable on botanical grounds. Prof. Bostrom some time ago announced the result of careful examinations made of actinomycotic tumors of cattle (thirty-two cases) and man (twelve cases). In the great majority of these cases he has been successful in tracing the causes of the tumor to kernels of grain, fragments of straw, etc., which he found in the starting point of the tumor, and which were profusely infested with actinomyces. These observations are confirmed by Saltmann, Bertha, Lunor, Schartan and Fischer, all of whom publish similar observations.

In the face of these facts only the theory of inter-transmission from animal to animal by cohabitation becomes highly improbable. Quite as rash is Dr. Williams in his conclusions as to the value of experimental inoculation of actinomycosis, which he calls the "crucial test" of contagiousness. The practice of experimental inoculation originated in the desire to continue the study of the pathological changes of mycotic diseases in the laboratory, and small animals were found to be particularly adapted to this purpose. It is true that it has been demonstrated in this way that some contagious diseases may be artificially transplanted, but there are also exceptions which break down the theory that such is a sure test for contagiousness. Pleura-pneumonia in cattle, for instance, has never been transmitted to any experimental animal, still it is justly considered a contagious disease.

On the other hand, we may inoculate a rabbit with the cocci of pus from an abscess and produce a severe disease and perhaps death, but nobody would look upon an abscess as contagious. Perhaps this example may seem ridiculous, nevertheless this and similar instances are facts which are not counted by some overzealous experimenters. With due regard, therefore, for the utility of artificial inoculation, it cannot, *ex ipso*, be accepted as proof of the true nature of a disease, nor does it explain the natural way in which the micro-organism enters into the body. But suppose the inoculation theory of Dr. Williams were correct, how are we to explain the large majority of failures to transmit actinomycosis experimentally. Even in this country, where little has been done in this respect up to date, the results are mostly negative.

Dr. R. R. Dinwiddie, of the Arkansas Agricultural Experiment Station, in his report on actinomycosis says, "Cultivation of the fungus on artificial media outside the body has not been successful in my hands, nor have I succeeded in producing the disease in healthy animals by inoculation." Dr. Bodamer (Journal, Vol. X., No. 2, 1889,) reports very interesting experiments with dogs, cats and rabbits. Although he claims to have succeeded in producing "marked lesions in six out of thirteen animals" a careful analysis of his records rather leaves one in doubt as to whether he produced genuine actinomycosis. He undoubtedly saw the difficulty, and modestly says on page 120, "But the experiments, I confess, are not altogether satisfactory, not being repeated in sufficient number. * * * Control experiments with other than actinomyces material were not made because I had witnessed in the investigations of Dr. Formad very numerous experiments with *simple irritants* to terminate in precisely the same manner as my above stated experiments, etc."

My own experiments, sixteen in number, (three dogs, two cats, three calves, eight cattle), were entirely negative except in the calf of the cow from which I used the virus for inoculation. But after making an incision into the artificially produced tumor of the calf for microscopical examination, it gradually disappeared without any treatment whatever, and

nothing but a slight scar left of it and the animal enjoys to-day, two years after the inoculation, the best of health.

From these experiments, which were skillfully performed and with the earnest desire to inform myself of the transmissibility or nontransmissibility of actinomycosis, I can frankly say that I have formed the firm opinion that it is difficult and at most times impossible to artificially produce true actinomycosis by inoculation from animal to animal, and that I cannot thus see how the natural propagation of the disease can possibly take place by intertransmission of animals, as advocated by Dr. Williams. This conclusion is the more unfortunate, as he delights in comparing actinomycosis with tuberculosis and glanders, which diseases radically differ from actinomycosis, in at least two points, namely: in the readiness to cultivate the bacilli, and in the result of experimental inoculation, which is so easily attained as to be useful for controlling a diagnosis.

But as critics may demand further evidence, it may be well to offer more cases of unsuccessful inoculation, and these are given in abundance by European experimenters. In fact they are so numerous that I must refrain from enumerating them here and can only refer to the latest contributions on actinomycosis by Prof. Bostrom in Ziegler's *Beitrag zur pathologischen anatomie* (neunter Band, 1891), which is so far the most complete treatise on this question.

Considering the matter as a whole from what has been published about actinomycosis during the last year, it appears that all our great authorities are becoming more and more of the opinion that actinomycosis is not a malignant disease. This view was very apparent at the last meeting of the International Congress of Hygiene in London, in August, 1891, and I shall shortly quote what some of these men had to say there about actinomycosis.

The Lancet, London, August 22, 1891, Section III—"Relation of diseases of animals to those of man." *Actinomycosis*, Prof. Crookshank. * * * With regard to intercommunicability of the disease between different species of animals, including man, he had failed to find any evidence in support

of the theory from clinical observation. He was *not* of the opinion that the disease was contagious in the ordinary sense of the word. *Prof. Ponfick* (Breslau) said that he agreed in the main with *Prof. Crookshank's* conclusions. In cattle the disease was generally transmitted by means of the fodder, especially straw. He thought that in both man and animals the source was the same and that the disease did not spread directly from one animal to the other. *Prof. Nocard* (Alfort) said that the observations of *Prof. Crookshank* had been confirmed by all observers. The geographical distribution of the disease was very irregular. Bavaria, Scotland, Italy and some of the northern states of America had been much affected. In France it was very rare and generally remained in an isolated form. He had never seen cases transmitted by contagion or infection. The disease appeared to him undoubtedly to spread by means of certain food-stuffs. The wholesale destruction of the flesh of the affected animals appeared to him to be quite unnecessary. *M. Doyeu* (Rheims) read a paper on three cases of actinomycosis in man, which he describes at length. He maintains that not only by the courses of the disease, but also by the different appearances of the fungus, one should be able to distinguish between the bovine and human forms. As regards the etiology, these three cases all come from the environs of Rheims; they lived in the country and one of them had a habit of chewing grains of oats and barley. *Sir Henry Simpson* remarked that in his district the disease was not endemic, and when imported, though it did not cease with the animals imported, yet it did not spread like a contagious disease. As to whether the meat from these carcasses was fit for human consumption, he was content to permit its sale provided the locally diseased parts were cut away. *Dr. George Fleming* commented on the grave doubts which existed of the direct communicability of this disease to the human species; if, therefore, an animal were in good condition and showed no fever, then its flesh was good to eat, but the actually diseased parts should not go into market. *Prof. Crookshank* in reply said that in comparing the disease with tuberculosis it should be remembered that it was not by any means so virulent as tuberculosis.

These short extracts are certainly valuable, as they show us the moderation of opinion of some of our best authorities on actinomycosis.

After having exhausted his attempts to show all the bad features of actinomycosis of man and animals, Dr. Williams becomes quite comical and produces the following tirade :

"A long list of the leading scientists of the day might be quoted, who believe in the contagiousness of actinomycosis, such as Bollinger, Ponfick, Johnne, Friedberger, Frohner, Rosenbach, Bizzozero, Lindquist, Heller, Peroncito, Ochsner, Crookshank, Fleming, Liautard, Law and others, almost without number. In fact it seems, in so far as your chairman has been able to learn, that contributors alike to standard and current veterinary literature of a recent date all are agreed that the affection is contagious. We understand that Prof. Schwarzkopf and other dissenters have given voice to their theories and deductions through the columns of the agricultural or live stock press, and avoided placing their views in form or place where it would come within proper range of scientific criticism. We trust that now, for once, Prof. Schwarzkopf and his colleagues will present their non-contagious theory of actinomycosis before this convention, from a scientific standpoint, and permit their arguments to be weighed upon a strictly scientific as well as practical basis. We desire that Prof. Schwarzkopf should fully explain his statement at our last meeting that he predicated his belief of the non-contagiousness of actinomycosis on his theoretical studies, and his practical work in the great abattoirs of Berlin. What great veterinarians of Berlin taught our fellow-committeeman that actinomycosis was non-contagious while such Germans as Johnne, Ponfick, Rosenbach, Friedberger and such veterinarians of the great Berlin Thierarztlichen Hochschule as Frohner, unitedly and without fear or apology denominate the disease as infectious? What facts has he learned in the slaughter-house of Berlin that demonstrate the non-transmissibility of the disease?"

To this I have the following to say : Bollinger and Friedberger were my teachers and neither of them have ever said that actinomycosis is contagious, which may be said to their honor. Ponfick, Johnne, Frohner, Peroncito, have said that actinomycosis is infectious, by which they mean that the micro-organism has its natural origin outside the animal body on vegetable life, but if introduced into the body accidentally produces a diseases. Crookshank and Fleming have similar opinions. Rosenbach, Bizzozero, Lindquist, Heller are unknown to me. Liautard and Law have pronounced the disease contagious, for which I have no explanation to offer except that I believe that Prof. Liautard holds a different opinion to-day.

I have not "avoided placing my views in form or place where it would come within proper range of scientific criticism," as I have had no fears to cross swords with Dr. Williams on scientific questions. The fact is that our American veterinary journals paid no attention to actinomycosis, but this was done by the better agricultural press. The *Breeders Gazette*, in commenting upon the pamphlet No. 1 of the Illinois Live-Stock Commissioners, in their issue of March 5, 1890, called forth several articles of Prof. James Law, who strongly advocated the contagiousness of actinomycosis, and it was not until he rejected—in a somewhat left-hand way—the statements of my former chief, Dr. Hertwig of Berlin, that I participated in the discussion in the *Breeders Gazette*, defending Hertwig's position. This was *public writing* and could be followed by any veterinarian who keeps acquainted with our agricultural press.

My theoretical studies and practical work at the great abattoirs of Berlin have naturally shaped my opinion of actinomycosis. Dr. Williams seems not to be aware that the Berlin abattoir has a bacteriological laboratory, which, superintended by Director Hertwig, its energetic chief veterinarian, is in charge of Dr. Dunker, a well known microscopist, who discovered the actinomyces of the muscles in hogs. From 1883-1885, while being employed there, numerous fruitless attempts were made to cultivate the actinomycosis in ordinary ways, together with inoculation experiments, which likewise failed to throw any light on the peculiarities of the fungus. He naturally gained the impression from these experiments, and by the information gathered from rural districts from which the affected animals arrived, that the disease could not be pronounced contagious.

The practical conclusion from what I have tried to explain in the foregoing pages certainly warrants the necessity of changing the *modus operandi* of some of our sanitary inspectors. I am strongly of the opinion that it is the duty of the sanitary veterinarian to *rather preserve meat than destroy it*. Sentimentalism such as the arguments of the abhorrence of the American for meat from animals not strictly sound, is

out of the way, as it throws a veil over the naked facts of science. It may be pardonable if uttered by a layman, but it is inexcusable in a veterinarian that has intelligently studied the theory and practice of sanitary science. Of course, we should condemn an animal that is suffering from general actinomycosis, which, however, is very rare. But it is unjust—alike to producer and consumer—to reject meat of good quality from animals because they have shown so visible an affection as lumpy-jaw, whereas we may daily consume meat of animals suffering from a more or less dreadful disease, such as we find in the slaughter-house only, but which is naturally overlooked under our present system of inspection of the living animal only.

I sincerely hope that the extreme views and teachings on actinomycosis by some of our American college professors may become more moderate; for there is nothing to gain from obstinately declaring actinomycosis to be a contagious and dangerous disease, but much to be lost in spreading broadcast such alarming professional opinions, which are at once injurious to our cattle-industry and to the scientific standing of the veterinary profession of this country.

THE USE OF LITHIUM IN VETERINARY PRACTICE.

By S. S. BAKER, D.V.S., Chicago, Ills.

(A Paper read before the Illinois State Veterinary Medical Association).

In casting about for a subject for your consideration that was not already worn threadbare, it occurred to me that a brief statement of my experience in the use of a new remedy I had been using of late with a good deal of success might be of interest to you. The use of lithium has only of late been introduced to any extent in medical practice, and not at all in veterinary practice as far as I have been able to discover; and why it has remained an obscure and untried drug so long I am at a loss to understand. I certainly have found it a very valuable addition to our list of remedies, its only objection being its expense.

Lithium salts, like the potassium, are of an alkaline nature ; and while the two salts are alike to a certain degree, they differ very materially in some of their actions, the principal difference being the solvent power of lithia over uric acid, with which it forms a very solvent salt, while the potassium salts have no such power. There are five salts of lithium that are officinal, viz., the bromide, benzoate, salicylate, carbonate and citrate ; the last two are the only ones applicable to our patients. While the carbonate has an alkaline reaction, it is nearly insoluble, taking one hundred and thirty parts of water at 59° F., and about the same amount of boiling water ; is wholly insoluble in alcohol ; therefore this salt is only available when given in powder or bolus.

The citrate of lithium is very soluble, dissolving in 5.5 water at 59° F., therefore this salt is the one I wish more particularly to call your attention to. While the citrate has a neutral reaction, and is useless as a local alkali for the neutralization of acids, it is transformed to a carbonate after becoming absorbed into the blood ; constitutionally therefore it is the equivalent of the carbonate and is finally eliminated by the kidneys. While the salts of lithium are, as the potassium salts, powerful diuretics, they are less irritant to the stomach and kidneys, and on this account are far preferable, in the treatment of the disease I am using it for, to the potassium salts. The disease in which this drug is the most applicable is azoturia, and to my mind it far excels any other drug for that purpose. I will cite a few cases where I have tried it to my utmost satisfaction.

CASE I. Seven-year-old truck horse taken with azoturia four miles from home. The driver noticing something wrong with him got him unhitched and into a livery stable before he went down. I got to him one hour afterwards ; found him unable to rise, sweating profusely and struggling furiously. After passing catheter, I prescribed lithii citras in doses of 3 ii, together with tinct. gentian every three hours. Next day found the horse able to pass urine, and making very good efforts to rise. I reduced the lithium to 3 i doses three times a day. Next day I found horse standing, but moved

about with difficulty. I continued the lithium for two days longer, when I changed to nux vomica. Horse walked home in ten days.

CASE II. Driving mare, nine years old, brought to hospital, having been taken close by. She went down immediately after being admitted; passed catheter and gave lithii citras in 3 ii doses every three hours for twenty-four hours. Second day mare got up and passed urine without the aid of catheter; reduced the doses of lithium to 3 i three times a day for two days longer, when lithium was stopped and cinchona, etc., was given, the mare making a good recovery in a week.

CASE III. I consider this case of the most importance as demonstrating the applicability of this drug in the treatment of this disease. I was called to see a six-year-old cab horse suffering with what was supposed to be colic. I received the call at nine o'clock P.M., and found that the horse had been down since five o'clock that afternoon, the owner thinking it a case of colic from which he would recover without assistance. I found the horse in a profuse perspiration, unable to rise, although making frantic efforts to do so. I found considerable hyperæmia of the muscles of the lumbar region, some fever, pulse rapid and hard, with considerable delirium. After passing catheter I prescribed lithii citras in doses of 3 ii every three hours and bromides every three hours alternately. Applied hot salt to loins. Next morning I found the delirium gone and horse resting easily. The attendant thought the horse had urinated, but passed catheter and found that he had not. I stopped the bromide, still continuing the lithia with the addition of tinct. gentian. Passed the catheter again at night. Next day the attendant was positive the horse had urinated, consequently did not pass the catheter again. The horse remained down ten days before being able to rise, when he would stand a few minutes and lie down again. I continued the lithium every three hours for four days, when I changed it to three times a day in 3 i doses, with the addition of cinchona and nux. One week from the time he got up he walked about, but was very lame. He improved very

rapidly, and went to work in about six weeks from time he was first taken.

Since beginning the use of lithium I have had a number of cases of this malady, with only one fatal result. A draft mare being brought to the hospital in an ambulance, she was dragged to box stall on her side, and expired four hours afterwards.

While not claiming that this drug is a specific in this trouble, it has certainly given me more satisfaction than any other I ever used. If in bringing this subject to your notice it is the means of assisting any brother practitioner in the treatment of this, the bugbear of all diseases to the profession, I will feel that my efforts have not been in vain, and I would be most pleased to hear with what success any of you may meet after trying the drug.

SCIATICA.

By JOHN SCOTT, V.S., Peoria, Ill.

(A paper read before the Illinois State Veterinary Medical Association.)

During the summer of 1890 I was called upon to treat the following case, which I diagnosed as sciatica, and as I have only seen two such cases during a practice of six years, both of which occurred under conditions almost identical and both in horses kept for racing purposes, I judge that such cases are somewhat rare in our patients. I am forced to this conclusion not because I have only been fortunate enough to see two cases, but from the fact that in all the works on veterinary science that I have had an opportunity of reading, I fail to find such a disease even mentioned, and in our veterinary journals the only place I see such a disease referred to is in the March 1889 number of the REVIEW, where a case is recorded, but that is an extract from a foreign journal. For these reasons I call your attention to it to-day, and hope it may prove as interesting to you as it did to me.

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park found that the animal affected was a seven-year-old pacing gelding, record 2.24¾.

I asked for and obtained the following history of the case from his owner.

He had been started in his first race of the season at Bloomington, the first week in July; next week was in a hard contested race at Springfield, after which he went a trifle lame in near hind leg. The next week he was in Decatur, but was not started; from Decatur was shipped to Peoria, arriving here on Sunday, July 19th. On Monday, Tuesday and Wednesday mornings he was jogged for a few miles on the track, but being still slightly lame his owner concluded to ship him home until fully recovered, but when they started to lead him to the shipping platform, they only got about three hundred yards from the stall, when he was taken so suddenly and violently lame and seemed to be in such agony that it was almost impossible to get him back to the stall, where I saw him about half an hour later, presenting the following symptoms: His general appearance showed at a glance that he was suffering intense pain of a nervous character, there being nervous twitchings and slight clonic spasms of the muscles, holding the near hind leg clear of the floor, but continually moving it in a convulsive, jerky, nervous manner, nostrils dilated, breathing very much accelerated, pulse 85 and weak, temperature 103°; body covered with perspiration.

A close and careful examination of the foot and leg revealed nothing wrong, but on manipulating the hip and thigh the symptoms were very much aggravated, the poor animal groaning from pain on pressure being brought to bear on these parts and clonic spasms of the muscles being much more severe.

I gave potassium bromide ʒss, and also morph. sulph. grs. iv. hypodermically, injected a five per cent. solution of cocaine into the muscles of hip and thigh, and ordered hot woolen blankets applied to the hip.

On my return in about two hours I found him in about the same condition, suffering intensely, sweating profusely, but body cold.

To satisfy the owner I passed the catheter, and drew off a small quantity of natural looking urine. I then gave him potassium bromide $\frac{3}{4}$ ss, chloral hydrate $\frac{3}{4}$ ss and gelsemium fl. ex. $\frac{3}{4}$ i; in an hour repeated the bromide and gelsemium, and after that every two hours; kept hot blankets to the hip and used an anodyne liniment. At 10 P. M. he was feeling easier, so I left him in charge of an attendant, with instructions to give two doses of bromide and gelsemium during the night.

I saw him next morning about five o'clock, when he was looking and feeling better. He had turned round in his stall during the night, being the first he had changed his position, but would bear no weight on the affected limb.

I continued giving the bromide and gelsemium every four or five hours, gradually decreasing the dose as the nervous symptoms disappeared, and on the fifth day discontinued them entirely and prescribed tonics, as his appetite was very poor.

During this time I had been treating the hip and thigh with hot blankets and anodyne liniments, but as the gluteal muscles began to show signs of becoming atrophied and the pain still being severe, I applied a blister to the parts. The third day after applying it we led him out of the stall for the first time, but he would scarcely bear any weight on the affected limb; merely touching the toe to the ground. But as the owner was anxious to get away, we concluded to try and move him to my hospital, which we did the following night, where he laid down for the first time. He laid down pretty regular after this, but had to be helped up for several days.

I continued giving him tonics for about three weeks before he regained his appetite, and by this time he wasn't much more than a shadow, but was able to walk out for a little exercise, and from this time on he improved quite rapidly.

The gluteal muscles became very much atrophied, but this I finally overcame by repeated blistering.

In about six weeks from the time he was admitted to the hospital I put him in harness for the first time and drove him a few blocks; after this gave him regular exercise and in

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sixty days from the date of admission I sent him home all right in every way except that the gluteal muscles were still slightly atrophied; but I had an opportunity of seeing him again in about six weeks, and at that time they were entirely filled out and had regained their natural appearance.

The other case I saw was during our race-meeting in July, 1891, and occurred in a seven-year-old trotting gelding, record 2.22¾. He started in a race on Thursday, winning two heats, when darkness came, and the race was postponed. The next day he came out all right, but in scoring down for the first heat, he went suddenly lame in near hind leg, so lame that it was difficult to get him to his stall. He presented the same symptoms in general that the other horse did, but not nearly so severe. I treated him the same as my first case, and in about a week he was sufficiently recovered to be shipped home.

NAVICULAR DISEASE.

By W. BRYDEN, V.S.

(Paper read at a meeting of the Massachusetts Veterinary Medical Association, February 24, 1892).

This article was intended for the meeting of our Alumni Association, at Montreal, which was unavoidably postponed. With your indulgence, I will present to you a short contribution on one of the diseases peculiar to the locomotive organs of the horse, *Navicular Disease*.

Prof. Dick says, "By high authority it has been called *the curse upon all good horse flesh* (though in passing we remark it is rather the infliction of man than of any higher power)." He then asks, after fairly and generously quoting the opinions of Mr. Turner, Mr. Percival and others, "Why then appear to differ when substantially we agree? Not that we are here arguing for concession which will compromise the truth; but we hold that the united, persevering ingenuity of scientific men has fully illustrated this disease; that it has predisposing causes, such as want of paring, shoeing, and still more, bad shoeing, hereditary tendency of particular breeds, and

high condition. * * * In like manner it has manifest exciting causes, such as strain of the tendon and over-exertion, pressure of the sole, from traveling with a stone in the foot, etc., etc."

The above are remarks by one who was a leader in our profession, and one whom all will long delight to honor and applaud. His efforts were directed to finding the "proximate cause" of this disease; consequently he endeavored to demonstrate that strain and over-extension of the tendon, where it passes under the navicular bone, injures the synovial capsule between the tendon and navicular bone. This he believed to be the primary and permanent disease.

Now we do not quote the above because it is correct, but because it is as nearly being so as anything on the subject found in works of much greater pretensions, published many years later. In both old and recent publications we find confusing statements and accounts of the views and theories held by old veterinarians, many of them eminent in their day and generation, no doubt, and interesting too; but they are more conspicuous now as picturesque figures in the history of the profession than for the exactness of their knowledge of those *diseases peculiar to the locomotive organs* of the horse; having failed to distinguish between such diseases, and those liable to afflict all classes of animals, a fault still found in recent works, which repeat the same old story with slight variations, because their authors view the hoof from a standpoint that did not credit it with the far-reaching influence it possesses and exerts.

For this reason I trust you will not consider it over-presumptuous on my part, with no better acquaintance with pathology than the ordinary practitioner possesses, to try to change the tale, be it ever so little. In the study of this subject, our attention is first directed to the fact that the soliped stands and moves on the points of his toes, which are covered and protected by a "horny box," a wonderful organism, having a limited elasticity and accommodation within it, and very liable to be affected adversely by surroundings and circumstances unfavorable to its organization and growth.

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This liability to change on the part of the hoof in its size, shape and quality, has a most important bearing on the organization, not merely of itself, but also of the structures contained within it, and on different parts of the limbs as well; indeed, the whole conformation of the animal is changed by acquired conditions of this wonderful "buffer," so unlike the foot of every other species of animal, that it must be the part primarily affected, the part that predisposes to and determines the character of such diseases, and the part that must be first treated, if the cause is to be philosophically studied, and successfully removed or overcome. For with an integument as soft and pliable as the skin, instead of the "horny box," it must be impossible to produce navicular disease, bone spavin, and many other diseases and defects with histories such as theirs, which we are now familiar with; just as there must be many diseases peculiar to horses' limbs that could not occur on the limbs of other species than solipeds.

Let us now suppose a horse having received a severe blow with a club at the seat of ordinary bone spavin, or that his mate has kicked him there, and a bony growth or deformity results, somewhat similar, perhaps, to true bone spavin. It could hardly be regarded as good pathology to either name, or similarly classify, diseases having such dissimilar histories and causes, any more than it would be to regard degeneration of the navicular bone, as met with in true navicular diseases, as the same disease of the same bone, the result of inflammation from a nail having accidentally or otherwise penetrated it.

In comparative work of this kind, clean lines must be drawn to give the student an exact, logical and intelligent appreciation of the subject. It must not be forgotten that while the hoof is liable to be affected adversely by heat or cold, moisture or drought, tear and wear, or idleness, etc.—extrinsic and intrinsic influences—it is possible to guide its growth in a right or wrong direction, and it can be cultivated with as much success as the gardener acquires in guiding and training his bulbs and rare plants.

In practice we often meet with cases of navicular disease,

and with cases of disease of the navicular bone, for they are quite distinct. For example, we find, 1st. True navicular disease, a gradual contraction of the hoof from bad surroundings, and neglect after birth, coupled possibly with some heredity; causing a slow change leading to *necrosis*, or gradual death of the bone.

2nd. A modified form of the above, hastened by such an accident as a prick with a nail that did or did not reach the bone.

3rd. Disease of the navicular bone, from its having been, for example, injured by a nail or other instrument, the bone itself being penetrated; inflammation is set up *in the cancellated structures* of both the *interior of the bone* and the *compact structures* at the same time. Here then are three varieties at least: In the first, hereditary or acquired predisposition. In the second, hereditary or acquired predisposition, coupled with accident. In the first and second then we find contraction *both* as a *cause* and as a *result* or *effect*. In the third, accident only; here contraction may only be as a *result* or *effect*.

To some such fine distinctions may appear frivolous, but it must be evident that the history of a lame foot is of much importance, especially to the breeder; whether the derelict hoof is covering a case of true navicular disease, either of heredity or of acquired origin, or a case of disease of the navicular bone, resulting from an accident or wound, and independent of the character of the hoof.

In looking over a recent edition of Prof. Williams' excellent Book of Surgery, one is surprised at statements like the following, on page 333, which must handicap the student in the study of such a subject. He says:

"Contraction of the hoof is not a cause but an effect of disease; an atrophy of the structures contained within the 'horny box' consequent upon diminished functional activity and adaptability of the hoof to the atrophied structures which it encloses and protects."

Continuing, he adds, "Prof. Dick said there was a kind of contraction of the hoof, in fact a *natural tendency* to this, in the domesticated animal arising from a want of moisture when he is

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confined to the stable. This kind of contraction, he [Prof. Dick] maintained did not cause lameness, as all the parts became adapted to the alteration of the hoof. Now in my [Prof. Williams] opinion this kind of contraction would be the one most likely to cause lameness; indeed, it would be impossible for an animal not to be so, if the pressure of the drying hoof were sufficient to cause atrophy and absorption of the sensitive tissues within." Again, Prof. Williams asserts the following: "That horses' hoofs do become contracted, more especially at the heels, without lameness, I do not deny. I do not think, however, it is due to any want of moisture, but to the removal of the horn from the heels, etc., etc."

With all due deference to this eminent author and teacher, permit me to submit that the contention that "contraction of the hoof is not a cause but an effect of disease" cannot be sustained, for it is quite possible of demonstration that it must be *both*. *Atrophy of the frog*, for example, when the result of mechanical pressure between the bars, is immediately arrested and can be restored by paring out the bars and keeping them soft; in other cases the bars can be left strong, but the wall must be weakened so it will bend outward, with the same result. Sometimes it is an advantage to reduce the wall at the quarter, or quarters, and at the toe, from the coronet to the shoe. This prevents the hoof from collapsing, and when properly done it relieves the circulation at the coronet, the hoof grows more robustly, the foot is less confined, and repair within it goes on more rapidly. But it is a most important matter to know how to pare a hoof, as it can be done right or wrong, too much or too little, and it requires practice.

Contraction from "atrophy of the structures contained within the 'horny box' consequent upon diminished functional activity and adaptability" [Prof. Williams], and Prof. Dick's theory of natural *tendency of the hoof to contract* is rather a fine drawn distinction and quibbling likely to confuse many a student, for cases where both contentions are illustrated can easily be found every day. Then, why mix up the terms "contraction" and "navicular disease?" "Contraction is

often found without navicular disease," but "navicular disease" never without "contraction," and within certain limits, always the same kind of "contraction," too. One may claim that the hoof must be pared; the other, the opposite; and that "adaptability" is or is not "contraction" might also be a contention, but will not get us out of the old ruts.

At the foot of page 335 Prof. Williams again informs us that "During the past five years, I [Prof. W.] have made numerous post-mortem examinations of 'navicular disease,' and am convinced that strain or laceration of the tendon is never a primary condition, and that the disease commences as an inflammation of the cancellated structures of the navicular bone, or of the cartilage upon its inferior surface." Impossible! there is a history, and slow, gradual changes in the hoof and soft structures within it and covering the bone, without which it would not be "navicular disease."

Inflammation of the cancellated structures, and of the inferior part of the cartilage, can only be present as the result of an accident, never at the beginning of *true* navicular disease, which is a slow, gradual process when not complicated; the bone degeneration is always the result of *slow starvation* of the structures within the bone. The tissues surrounding the bone become disturbed, perhaps congested, by the pressure or interference of the hoof, especially the sole and bars. This extends to, and affects the membrane covering the bone and lining the foramen, its functions are perverted, the elements intended to nourish the bones are refused admission or diverted; a process of *necrosis*, rather than *caries*, gradually follows; small particles of the rejected or arrested bone elements may then be transplanted or deposited on the exterior of the navicular bone, very much as in the degeneration of the cancellated structure in *true bone spavin*.

It is said on page 342 that "contraction of the foot always *succeeds* navicular disease;" with equal truth it can be said that contraction of the hoof always *precedes* it. For it always does *both* if the disease continues; at first, as an *exciting cause*; afterwards, as a *concurrent affection or process*. For example: If a strong, robust, symmetrical, well-developed horse receives a

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serious injury which compels the suspension of his limbs for months (it may be free from much pain), it diminishes in size, every part being involved in the *general* atrophy or wasting; the hoof contracting as the enclosed tissues waste from what Prof. Williams calls "diminished functional activity and adaptability." The animal recovers without scar, pain, or lameness; the tissues protected by the elastic skin soon regain their volume, but the soft tissues protected by the contracted hoof cannot. The hoof, having shrunk, has acquired a shape and size determined mostly by the coffin bone within. When standing idle, there is *nothing to cause irritation*, but as soon as put to work disturbances follow; then, instead of a general atrophy, we find atrophies and changes of particular parts, according to the shape, size and quality of the hoof, the degree of disturbance, and the demand made on it. *Changes*, the result of "diminished functional activity" and "adaptability," and *changes*, the result of disturbance, especially at the extremities, are therefore quite different conditions.

The hoof peculiar to navicular disease may be a hind one or a fore one; usually small; it has modifications. Consequently we find different degrees of the disease. One or both heels are shortened; one or both heel cartilages are bent inwards; one or both bars crowd; one or both halves of the frog diminish; one or both sides of the wall shrink, and the hoof is twisted, dry and hard, toeing out or in. When long idle, it is often cold, but when exercised it is hot. Every feature of the case proclaims mechanical interference by the "horny box," and demands treatment with the drawing knife, buttress and rasp, followed by persistent softening with poultices or otherwise, which will encourage repair and growth without the aid of the tortures now so universally popular in such cases.

Where we find such disturbance at the extremity there must be strain of the tendon, for there is always *shortening* of it when there is atrophy, just as we find *relaxation* in paralysis when the injury is central.

This is illustrated in cases of shortening of the flexor ten-

dons, as when the animal is compelled to walk only on the points of his toes (hoofs); in atrophy of the hip and tail muscles—the result of contraction of the heels and bone spavin—as when the tail is drawn to the atrophied side instead of going to the side on which the muscles are strongest—as it does in paralysis—the result of a central lesion or an injury; and again, in cases where the gaits and action acquired—and peculiar to the horse—are equivocal or faulty, either from peripheral disturbance or inharmonious organization of their limbs, from this or possibly some other cause.

The fact is, the hoof has never been appreciated at its proper value. No matter how defective it may have been, it has not been regarded as a factor of so much importance as it is in diseases and wrong conditions of itself, which involve the limb above.

VETERINARY LEGISLATION IN 1891.

By HENRY A. RILEY, A.B. LL.B., New York.

There was a large amount of legislation enacted in 1891, on medical, pharmacal and dental matters in the various States, and the interests of veterinary science were not lost sight of in the mass of other legislation.

In Colorado, Michigan, Missouri, North Dakota, Oregon, Pennsylvania, Tennessee and Wyoming, statutes were passed, some of which were of importance and interest, while others were slight amendments of existing laws.

In Colorado the law was amended so as to make the term of office of the State Veterinary Surgeon two years and the salary was fixed at \$1,500. The incumbent was required to give a bond of \$10,000 for the faithful performance of his duties.

In Michigan an interesting law was passed for the elevation of the profession, which authorized the formation of incorporated societies. These corporations were to be organized for the "acquisition and dissemination of knowledge pertaining to veterinary medicine and surgery, and for the

elevation of the standing of professional education and the association of members of the veterinary profession for mutual recognition, advancement and fellowship."

The incorporators were to be nine in number and must have received the degree of doctor of veterinary medicine and surgery from any medical school or college.

The articles of incorporation were required to state the objects of the society and it could have a legal existence for thirty years.

The requirements for membership were that the applicant must have sustained a reputable practice in Michigan or elsewhere as veterinarian for two years, with at least one year's study in the office of a reputable veterinarian or one collegiate year in a reputable veterinary college.

The terms of admission must also conform to the law of the State, if any should be enacted, regulating the practice of veterinary medicine and surgery.

The societies were allowed to hold property by gift and otherwise to the amount of \$10,000.

In Missouri the duties of veterinary protection were transferred from the State Agricultural College to the State Board of Agriculture, and the salary of the veterinary surgeon was fixed at \$2,500. The deputy veterinary surgeon was to receive \$7 a day.

In North Dakota the office of State Veterinarian was created and his duties carefully detailed. He was directed to investigate all cases of contagious disease and to make visits of inspection to all localities where he was informed or had reason to believe contagious diseases existed. He was authorized to seize and inspect all animals temporarily unloaded, when the owner did not produce a certificate of health from the State veterinarian or examiner in another state.

All pens, cars, etc., are required to be kept in good sanitary condition and were to be fumigated and disinfected if necessary.

In the case of all animals coming into the State he was directed to demand an affidavit that they had not been exposed to any contagious disease for ninety days.

He was authorized to order a quarantine and if a disease should become epidemic it was his duty to notify the Governor, who was then to issue a proclamation forbidding the transfer of animals without a health certificate.

Animals could be slaughtered if diseased, and were to be buried at least four feet deep.

The county sheep inspectors were required to report monthly to the State Veterinarian. The salary was fixed at \$2000 and expenses.

In Oregon the State veterinarian was authorized to employ local inspectors to ascertain the existence of contagious diseases and to establish quarantine and make sanitary regulations; when informed of the existence of disease he shall adopt measures to prevent its spread.

A commission could be appointed to appraise and kill animals when necessary.

The State Veterinarian was authorized to call on sheriffs, constables, etc., to execute his orders. The salary of the office was fixed at \$1,500 and expenses.

In Pennsylvania the time for the registration of veterinary surgeons, which was fixed in 1889 at six months, was extended to January 1, 1892.

In Wyoming the salary of the State Veterinarian was reduced from \$2,500 to \$1,800 and his traveling expenses were not to be more than \$750.

In addition to these statutes referring directly to the veterinary profession and the duties of its members, there were a considerable number of laws passed relative to the health of animals, and some of them are as follows:

In New Mexico a Sanitary Board was established and its duties in regard to the inspection of animals specified. In cases of scab sheep were ordered to be dipped.

In New Hampshire a State Board of Cattle Commissioners was organized, with quarantine powers regarding contagious diseases among animals.

A State Board of Live Stock Commissioners was organized in Wyoming.

In Oregon penalties were presented for the pollution of water to which live stock had access.

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In Kansas a law was passed to prevent the spread of Texas fever among cattle.

In Delaware, Texas or Cherokee cattle were allowed to be brought into the State if taken immediately from the cars to the slaughter houses.

The importation of domestic animals affected with contagious or infectious diseases was made a misdemeanor in California.

In Ohio the bodies of such animals were to be burned or buried.

In Arizona the inspection was authorized of live stock about to be killed for sale, or to be shipped or driven through the territory.

In Missouri quarantine was directed for all animals affected with glanders, and in South Carolina the importation of horses or mules affected with this disease was forbidden.

Sheep inspectors were appointed in North and South Dakota and their duties specified. This was also done in Wyoming and Texas, and the examination of sheep authorized to prevent the dissemination of scab.

In Oregon the running at large of infected sheep or their sale was forbidden.

In West Virginia the United States Inspectors were given privileges in regard to the detection and prevention of pleuro-pneumonia among animals. The inspectors could have the assistance of sheriffs and other officers, but the expense of the work was to be borne by the United States.

REPORTS OF CASES.

AMERICAN VETERINARY COLLEGE—HOSPITAL DEPARTMENT.

JABOT, OBSTRUCTION AND STRICTURE OF THE ŒSOPHAGUS

By E. J. NESBITT, D.V.S., House Surgeon.

The patient, a roan gelding about seven years of age, was brought to the hospital for treatment on the afternoon of January 28th, with the following history:

He had been given his usual mess for breakfast, which he ate heartily, and afterwards drank freely of water. After caring for him in the usual manner, the groom left him, to return at noon to feed him again, when he found him "choking," as he expressed it. Thinking that perhaps something had lodged in the gullet, he gave him a drench of oil, but this, instead of relieving the difficulty, appeared rather to increase the irritation. When the animal was brought to us, his temperature was normal, and respiration, though slightly hurried, was not difficult. The pulse was about forty and in good condition. There was a very frothy discharge from the nose and mouth, and at the base of the neck, on the left side, a swelling could be seen and felt, about the size of a man's fist, and some two or three inches long. How far this swelling extended inside the thorax we failed to discover. At very short intervals he was seized with spasms of the muscles of the cervical region and also of the face, which during their continuance gave him a very agonized aspect. The spasms were occasionally accompanied by a discharge from the nostrils of a quantity of frothy mucus, which gave him the appearance of vomiting; and at every spasm, and often between them, he uttered a short, sharp and peculiar cry. That relief must be prompt, to be effectual, was very evident.

The animal was therefore thrown, and after some difficulty a long rubber catheter was introduced into the pharynx and œsophagus as far as the entrance of the chest; but unfortunately it was too short to reach the point of dilatation and dislodge the obstructing body. A hard rubber or whalebone probang was then tried, but because of its inflexibility could not be inserted beyond the soft palate.

The owner was then informed that œsophagotomy was the only remaining resort; but, in view of the rather unfavorable aspect of the case, he preferred the destruction of the animal. Mucilaginous drinks were offered, but even the slightest effort at swallowing excited such an accession of spasms that we felt compelled to leave him entirely to the processes of nature. The next day he was, if anything, worse. The temperature had risen one degree; the pulse had become

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more rapid, and was weaker; and respiration was hurried, although the lungs were perfectly normal. The spasms and the accompanying symptoms had become exaggerated, and he continued steadily to grow worse, until the morning of the 31st, when he was relieved by pithing.

At the post-mortem a portion of the œsophagus, extending from the pharynx to the stomach, was removed and found to be diseased, being congested and softened throughout its entire length. At about the point where the œsophagus passes between the first and second ribs there was a dilatation of perhaps the size of two closed fists, which was not of recent occurrence, but must have existed for a long time, the mucous coat, in fact, protruding for a length of some six inches through a laceration of the muscular covering, the fibres of which were irregularly but intimately adherent to the protruding portion of the membrane. Farther back, at about the middle of the thoracic portion, the obstruction was found in the form of a plug of impacted food, resembling a large, elongated bolus, which filled the œsophageal tube for a space of at least two or two and a half inches. This was quite dry, and consisted of chewed hay, straw and oats. Posterior to the plug, the stricture was plainly discovered, the tube being contracted precisely as if ligated. Back of this the œsophagus was normal. Had this bolus been crushed or displaced, the animal might have made a temporary recovery.

Some interesting questions are suggested by this case, these amongst them: "Was the stricture due to the irritation caused by the plug, or did it exist before?" Whatever the answer may be, would it justify the combination in suspected similar cases of internal anti-spasmodic prescriptions with the external local and surgical methods which constitute the general rules of the classical treatment of affections of this nature?

EXTRACTS FROM FOREIGN JOURNALS.

CAUTERIZATION IN ULCERATIVE KERATITIS.

BY M. P. HAAN.

No one possessing a familiar knowledge of this affection can be unaware of the serious nature of its usual symptoms,

and the results which commonly attend it. Following simple keratitis, conjunctivitis, or traumatism of the cornea, it is also commonly seen in distemper; but in all its forms it is apt to be more or less irresponsible to treatment, whatever may be its character, or whatsoever may be the medicaments employed, whether vegetable or mineral astringents, solutions of alum, or sulphate of zinc, or copper, or iron, or collyria of alcoholized water, or even the nitrate of silver caustics, or corrosive sublimate, as recommended, by Nocard.

The author, having treated several cases of traumatic ulcerative keratitis, has had recourse to actual cauterization with very fine points, applied superficially on the edges of the upper eyelid; a fine knitting needle forming a very eligible instrument for the operation. For local treatment of the globe, he applied on two occasions the pencil of sulphate of copper, and in about ten days there remained but a small leucomatous cicatrix, which was soon removed by the insufflation of pulverized rock candy and calomel in equal parts.

—*Rec. de Med. Vet.*

TREATMENT OF HEMORRHAGIC PHLEBITIS.

BY M. G. MARIS.

[The operation of phlebotomy being seldom performed by American veterinarians, the complication referred to is not likely to be often encountered in their practice. But when it occurs it sometimes constitutes a serious accident, and the hemorrhagic flow becomes difficult to control. The author's remarks may prove of interest and profit to our readers. —Ed.]

The wound being thoroughly cleaned, and the hair cut short, the head is kept well extended on the neck in order to judge accurately as to the amount of the hemorrhage. If this is abundant, a temporary hemostatic ligature is applied above the wound caused by the bleeding and from which the blood escapes. The wound is then thickly covered with iodoform, over which is placed a layer of collodion, containing 1 per cent. of iodoform and of perchloride of mercury, and

this is again covered with a piece of plaster moistened with collodion. Then over this first dressing aseptic cotton, dipped in silicate of potassia, is placed and retained by three or four rolls of bandages or pieces of plaster, also impregnated with the silicate.

The hemostatic ligature is then removed, and the animal so secured as to prevent him from rubbing the neck. In ten or twelve days the dressing becomes loose and is detached, leaving a simple, healthy, granulating surface.—*Ibid.*

PUTRID ABSCESS OF THE ABDOMEN FOLLOWING OVARIOTOMY
IN THE MARE.

BY DELAMOTTE AND CHARON.

A mare upon which this operation had been performed without previous disinfection of the vagina, was attacked by high fever and colics, a few days subsequently. Her condition assumed a serious aspect, and fears of septic peritonitis were entertained. By careful attention, however, this was avoided, but an enormous abscess followed, situated in the pelvic cavity, between the walls of the vagina and the peritoneal coat. This abscess, however, fortunately emptied itself into the vagina and the animal recovered after a long convalescence.

This case once more indicates the value of antiseptic measures and the necessity of their persistent and habitual employment in veterinary surgery.—*Revue Veterinaire.*

GANGRENOUS SEPTICÆMIA FOLLOWING SUB-CUTANEOUS
INJECTION OF MORPHINE.

BY M. DELAMOTTE.

A vicious mare was ovariectomized, while already suffering with an extensive wound of the left elbow, and to keep her under control several hypodermic injections of chlorhydrate of morphine were administered. She did not seem to suffer from the operation, but died a few days afterwards with generalized septic infection, which first exhibited itself on the neck, at the place where one of the injections had been made.—*Journ. de Med. Vet. et Zoot.*

INTESTINAL FISTULA FOLLOWING EXOMPHALUS.**By M. PARDON.**

An eight-month mule was treated for an umbilical hernia, with a friction of ointment of bichromate of potassa. On three different occasions, with intervals of four months between, the applications were renewed, the hernia having undergone no change. After the last application a large abscess appeared, and ulcerated in four places, through which the contents of the intestines and the pus escaped together. Under the cautery, both actual and potential, applied over the walls of the phlegmon, the discharge from the fistula ceased, the hernia disappeared, and the animal recovered after a treatment of forty days.

This case tends to show that intestinal fistulas of this nature are not always quite so serious as they may have appeared to be.—*Revue Veter.*

PROPHYLAXY OF RABIES.**By PROFESSOR PIANA.**

The author proposes castration of all males as one of the best means of prophylaxy of rabies. It is not proposed because castration can be supposed to impart immunity against the rabic virus, but because of the effect which the operation would produce upon the habits of the animal—the castrated dog becoming more sedate and tractable, less desirous to leave his home after the female, and so becoming better tempered and more domesticated.—*Il Moderno Zooiatro.*

GLANDERS IN A CAT.**By M. LISSIGIN.**

The author concludes from his researches :

1st. That the cat, without reference to sex or age, is very susceptible to the infection of glanders.

2d. The period of incubation continues about three days. At first the temperature rises to 40° and then falls somewhat, and on the third day there appears at the point of inoculation

a tumor, quite large, which soon ulcerates and changes to a glanderous chancre.

3d. The virus of the glanders of cats, and its cultures, are very virulent for other cats, which it kills rapidly.

4th. The inoculation of cats with equine virus produces a form of disease very characteristic.

5th. The inoculation of the cat with pathological products suspected of being glanders gives good results. The inoculated spot not only becomes the seat of glanderous ulceration, but metastatic abscesses soon appear all over the body, and death takes place between the eleventh and the twenty-second day, the animal losing flesh largely meanwhile. At the post-mortem the lungs and spleen are found to be full of glanderous tubercles, and the septum nasi is covered with extensive chancres.—*Giornale di Vet. Mil.*

TWO CASES OF CHRONIC HYDROCEPHALIA CURED BY PILOCARPINE.

By M. R. RAIA.

The first case is that of a horse which some weeks previously had shown symptoms of cerebral congestion, and which after a few days' treatment had returned to his work, but when sick again showed all the symptoms of chronic hydrocephalia. He received subcutaneous injections of chlorhydrate of pilocarpine, the first of seventy, the second of eighty, and then successively four more of eighty centigrammes each. The head was kept covered with a bag filled with ice. After the second injection the symptoms seemed to improve, and this improvement continued until recovery, which occurred after a few days' treatment. In the second case the animal received for the first injection sixty-five centigrammes, a second of seventy, and a third of seventy-five. Local treatment of the head consisted in ice applications.—*Ibid.*

STERNAL PERIOSTITIS AND CONSECUTIVE PERICARDITIS.

By M. LARL.

A ten-year-old mare showed a tumor as large as a man's head in the sternal region between the fore legs. It was pain-

less, but interfered with the motion of the animal. It was supposed to have originated in a seton which had been applied two years previously. The animal was destroyed. At the post-mortem examination extensive periostitis of the sternum was discovered, the tumor involving the two posterior thirds of the cartilage. It was formed of lardaceous tissue, mixed deeply with ossified spots. The inflammation of the bony structure had extended to the pericardium, as shown by a thick, false membrane covering its surface.—*L. Ercolani.*

GERMAN EXTRACTS.

Translated by RICHARD MIDDLETON, D.V.S.

REPLACEMENT OF PROLAPSED UTERUS.

Many times in my career as a novice have I had great difficulty in replacing an inverted uterus, and still more in retaining it within the body after once adjusting it in the physiological position. The purchase of bandages for the replacement pre-supposes considerable outlay. Hypodermic injection of morphine has proved with me more practicable and cheaper.

As soon as I am called to a case of prolapsus uteri, I immediately inject the following solution:

℞ Morphin. Sulph., gr. viii,
Aquæ Distill., 3 ij,
M.

If the organ has not been cleansed I order the same to be done with a tepid carbolic solution; this removes all foreign and infectious bodies, and at the same time stimulates circulation.

The uterus is now placed upon a clean cloth and supported by assistants; in this position it is retropelled by placing the closed hand upon the fundus and pressing forward. Should this prove a slow method, the mucous membrane, and to a small extent the submucous tissue, is scarified. When the organ is once within the body and in its normal position, some one should retain it there until it assumes the tempera-

ture of the surrounding parts—which may consume half an hour. This being accomplished, the lips of the vulva are brought in juxtaposition by carbolized silk sutures, an aperture being allowed to remain open for the escape of urine. The animal is placed in a position favorable to the retention, to wit, the posterior portion of the body is elevated for two days. In case the expulsive efforts subsequently recommence, doses of alcohol and coffee should be administered. After ten to fourteen days the stitches are removed, and the animal discharged as sound.—*Berl. Thier. Woch.*

IMMUNITY AGAINST THE VIRUS OF PUS.

R—— has experimentally confirmed the assertion that animals having successfully withstood peritonitis possessed, to a certain extent, immunity from infection of the abdominal cavity. He proved that dogs were able to stand large quantities of staphylococcus pyogenes aureus when the injections were consequently increased from a minute quantity. These animals were also accustomed to large doses of pus by first receiving large doses of the ptomain. This confirms the view of Briegers that the toxic quality of pus is referable to the ptomain. This discovery has the practical worth of demonstrating that in researches upon pus, the same animal must not be used for a number of experiments.—*Wochenschrift.*

COLLEGE COMMENCEMENTS.

AMERICAN VETERINARY COLLEGE.

The commencement exercises of this institution were held on Thursday, March 17, at Chickering Hall, before a crowded assemblage of the friends of the Alumni and of the college.

The divine blessing was invoked by Rev. Dr. T. R. Morse, and the degrees were conferred on the graduating class by President F. D. Weisse, M.D., the names of the following forty-seven new graduates being successively announced by Prof. A. Liautard, M.D., V.M., the dean of the faculty :

LIST OF GRADUATES.

Harry Webster Acheson, Washington, D. C.; James Edgar Assing, New York, N. Y.; Ulysses S. Grant Bieber, Kutztown, Pa.; Wendel Valentine Bieser, New York, N. Y.; Charles Richard Borden, Taunton, Mass.; Thomas Earle Budd, Woodbury, N. J.; John Campbell, New York, N. Y.; Carlisle Norwood Darke, Guttenberg, N. J.; Robert Dickson, New York, N. Y.; William Henry Dodge, Leominster, Mass.; Bruce Linwood Drummond, Woodbridge, N. J.; Charles Frank Dwinal, Mechanic Falls, Me.; Andrew Young Earl, Honeoye Falls, N. Y.; John Thomas Ferley, Jr., Philadelphia, Pa.; Charles Hugo Ford, Moorefield, W. Va.; Jacob Homer Gardner, New York, N. Y.; James Alfred Haas, Lyon Valley, Pa.; Arthur Julius Hammerstein, St. Louis, Mo.; Horace Albert Hedrick, Cockeysville, Md.; Michael F. Hoar, Springfield, Mass.; Joseph Rhodes Hodgson, Jr., Brooklyn, N. Y.; James Henry Honan, Delphi, Ind.; George Washington Hood, New York, N. Y.; John Bogert Hopper, Ridgewood, N. J.; Abel Sackville Richard Jones, New York, N. Y.; Theodore Aloysius Keller, New York, N. Y.; William Bennett Kelley, Holtsville, L. I.; Bernard Paul Kenny, New York, N. Y.; William Arminius Koke, Brooklyn, N. Y.; John Eugene Kramer, San Antonio, Tex.; Louis Henry Kraus, New Haven, Conn.; Horace Deland Lambert, Salem, Mass.; John Stilwell Lamkin, Loveland, Col.; Frank Kirk Nice, Germantown, Pa.; William Arthur Nickel, Brooklyn, N. Y.; Frederick Adrien Nief, Paris, France; William Lawrence Nunan, Coriz, Pa.; Adam Wilson Ormiston, Germantown, Pa.; José Maria Peralta, Cartago, C. A.; Charles Wyman Shaw, Kingston, Mass.; Thomas Whaley Shaw, Worcester, Mass.; Albert James Sheldon, Naugatuck, Conn.; Edward Jacob Shipsey, New York, N. Y.; De Witt Clinton Smith, Greensburg, Ind.; John David Sturm, Dana, Ind.; William Rogers Tatum, Glenelg, Md.; William Franklin Woolston, Victor, N. Y.

Professor C. Doremus in his usual happy manner then awarded the following prizes to the successful competitors:

The trustees' prize for the best general examination to William A. Koke, D.V.S.

The faculty prize for the best practical examination before a committee composed of members of the Alumni Association jointly with the practitioners of the city, to Frederick A. Nief, D.V.S.

The Almuni prize for the second best general examination to Albert J. Sheldon, D.V.S.

Together with honorable mention of Adam W. Ormiston in connection with the prize.

There was no anatomy prize in the senior class, but the junior class prize was gained by Mr. G. Ferguson, for the best examination in junior anatomy.

The prize of the college class association was awarded to Edward J. Shipsey, D.V.S.

The valedictorian of the occasion was Albert J. Sheldon, D.V.S.

Rev. Dr. R. Terry addressed the newly graduated veterinarians, in an eloquent speech, full of valuable suggestions and appropriate allusions, fitly and impressively conveyed, and forming a most acceptable didactic and oratorical treat.

The incidents of the evening were of the pleasantest kind. The stage was converted into a flowery parterre, and to the perfume of the flowers were added the beautiful harmonies of Cappa's Seventh Regiment band, and smiling faces and congratulatory salutations gave brightness and pleasure to the scene. Even the March bluster, of which there has been overmuch, was tempered to a brief calm, and taking it for all in all, the graduates of the class of 1891-2 cannot but feel satisfied upon a review of the experiences of their last day of college life, and their enrollment in the ranks of the best friends of the horse and his companions in their service of man.

NEW YORK COLLEGE OF VETERINARY SURGEONS.

At the last commencement of this institution, held on the 18th of March, the following gentlemen were presented with their diplomas and with them the degree of V.S. (Veterinary Surgeon):

P. J. Bryan, Brooklyn, N. Y.; G. W. Browning, Lincoln, Ill.; R. J. Church, Grand Forks, North Dakota; A. K. Davidheiser, Pottstown, Pa.; Van C. Dull, Phillipsburg, N. J.; Henry Dutcher, U. S. A., West Point, N. Y.; H. W. Eliot, New Haven, Conn.; V. H. Gibson, Upper Sandusky, O.; D. W. Gilbert, South Salem, N. Y.; S. A. Honeywell, Cleveland, O.; Walter Johnson, More, Pa.; Ferdinand Hueppe, Berlin, Germany; S. B. McDougall, Grove City, Pa.; Wm. McLoughlin, New York City; John McTammany, Brooklyn, N. Y.; John P. Matthews, Lambertville, Pa.; Enos S. Moyer, Hillstown, Bucks Co., Pa.; A. Peschmanns, Lakegrove, L. I.; Hervey T. Potter, New Haven, Conn.; Benj. Schmidt, New Bremen, O.; Stanley Smith, Columbia, Mo.; Charles Seay, Frankfort, Ky.; Chas. Seilmann, New York City; William Swan, New York City; Eli Straus, New York City; Harrison F. West, New York City; Walter Howard Wilson, Philadelphia, Pa.; Fred Winters, White Lake, N. Y.; Harry S. Willis, Rapidan, Va.

CHICAGO VETERINARY COLLEGE.

At the commencement exercises of this institution, held on the 24th of March at Hooley's Theatre, Chicago, the following seventy gentlemen received the degree of D.V.S.:

C. H. Anthony, W. S. Arbuthnot, J. G. Atchison, C. H. Bagnall, B. Baldwin, F. H. Barr, D. E. Baughman, S. H. Bauman, J. H. Beadle, A. E. Behnke, G. Brauchle, F. Briggs, F. F. Brown, M. H. Browning, L. Campbell, E. N. Chute, J. B. Clancy, W. S. Clark, P. D. Coffey, T. D. Collins, G. D. Crossan, W. H. Curtiss, D. G. Davison, J. P. Denby, C. O. Donaldson, Geo. C. Eckley, F. H. Farmer, Jas. G. Fish, W. R. French, V. E. Frizzell, W. W. Giles, T. E. A. Giller, R. H. Greer, W. C. Hanawalt, J. W. Haxby, J. Henderson, E. Herring, B. O. Johnson, C. H. Johnson, P. Justice, J. L. Kearney, D. O. Knisely, L. L. Knoble, A. H. Kyle, M. F. Leffingwell, E. P. Leresche, W. B. Lewin, E. J. List, E. G. Marten, C. B. McClelland, S. McCluer, E. J. McLeod, R. H. McMullen, Emil Mueller, S. E. St. John Paulet, J. S. Potter, J. Robards,

J. Robertson, C. Schmitt, J. J. Schmitz, H. E. Sherman, T. F. Stanton, F. Tefft, G. E. Uehren, J. T. Unertl, E. J. Walter, W. H. Welch, M. B. Whitcomb, W. S. Winget, A. Youngberg.

SOCIETY MEETINGS.

MASSACHUSETTS VETERINARY ASSOCIATION.

Regular meeting of the Massachusetts Veterinary Association held at 19 Boylston Place, Boston, Wednesday evening, February 24th, at 7:30 o'clock. President L. H. Howard in the chair.

Members present: Drs. Bryden, Blackwood, Bunker, Becket, Emerson, Hadcock, Howard, Osgood, Winchester, Winslow, Parker and the Secretary. Honorary member: Dr. Stickney. Visitors: Drs. W. L. LaBaw and F. B. Carlton; also Messrs. G. Sawyer, Geo. Quinlan and Murch, senior students at the Harvard Veterinary School.

Records of the last meeting read and accepted.

Dr. Winchester reported the result of the meeting of the Comitia Minora of the United States Veterinary Medical Association in New York recently, and that it was decided to hold the annual meeting of the Association in Boston on the third Tuesday, Wednesday and Thursday in September.

Motion made by Dr. Blackwood and seconded by Dr. Bunker, that the report be accepted, and a vote of thanks be extended the committee. Carried.

Dr. Bryden, chairman of the committee to write to the Governor regarding the Cattle Commission, reported for his committee.

Motion made by Dr. Winchester and seconded by Dr. Blackwood, that the report be accepted and a vote of thanks be given the committee. Carried.

Motion made by Dr. Bunker and seconded by Dr. Blackwood, that the committee's report be put upon the records of this Association. Carried.

The report is as follows:

BOSTON, MASS., Jan. 27th, 1892.

To his Excellency, William E. Russell, Governor of the State of Massachusetts :

SIR: We, a committee appointed by the Massachusetts Veterinary Association for the purpose, Jan. 27, 1892, desire to represent to Your Excellency that in the opinion of the representative body of the profession in this State, that any important question relating to the contagious diseases of animals should properly be referred in its finality to a member, or members, of our profession for decision.

It desires to make no suggestion as to how this result shall be accomplished, but simply to state that in its opinion all questions relating to contagious diseases of animals bear the same relation to the veterinary profession that contagious diseases of the human subject bear to the medical profession.

WILLIAMSON BRYDEN, V.S.,
FREDERICK H. OSGOOD, M.R.C.V.S.,
LESTER H. HOWARD, D.V.S.,
Committee.

The following was received in reply :

COMMONWEALTH OF MASSACHUSETTS, }
EXECUTIVE DEPARTMENT, }
BOSTON, Jan. 29th, 1892.

Mr. Williamson Bryden, 36 Sudbury St., Boston, Mass. :

MY DEAR SIR: I have received the opinion of your committee, submitting the action of the Massachusetts Veterinary Association in reference to the necessity of having skilled and professional opinion upon questions relating to contagious diseases of animals.

I fully agree with the views of your Association, and shall endeavor, as far as is in my power, to carry out those views.

Very truly yours, WM. E. RUSSELL.

James B. Paige, D.V.S. (Mont.), Professor of Veterinary Science at the Massachusetts Agricultural College, Amherst, was voted upon for membership. Twelve ballots were cast, all in the affirmative, and Dr. Paige was accordingly elected.

Applications for membership were received from Drs. W. L. LaBaw and F. B. Carlton.

Dr. Winchester proposed that we take some action now towards arranging a programme for the meeting of the United States Veterinary Medical Association here next September,

and thought a committee of arrangements should at once be appointed to make hotel and railroad rates.

Dr. Bunker approved Dr. Winchester's remarks, and moved that a committee of five be appointed, including the President and Secretary of this Association, to find out and report at our next meeting what arrangements can be made for the entertainment of the United States Association as regards hotels, railroads and all other matters relating to the same. Seconded by Dr. Osgood.

Dr. Bryden agreed with Dr. Winchester's ideas.

Motion carried.

The Chair appointed Drs. Winchester, Bunker and J. S. Saunders on the committee, with the President and Secretary members *ex officio*.

Dr. Bryden then read a paper upon "Navicular Disease," after which a discussion followed, taken part in by the members present.

Dr. Osgood, recently appointed Professor of Veterinary Surgery at the Harvard Veterinary School, announced that he had taken entire charge of the Harvard Veterinary Hospital, and was ready to extend any courtesy to the Association, and would be happy to receive the co-operation of its members.

Dr. Bunker promised a paper for the March meeting.

Motion made by Dr. Bunker, seconded by Dr. Blackwood, that a vote of thanks be given Dr. Bryden for his paper. Carried.

Motion was made by Dr. Winchester, seconded by Dr. Emerson, that hereafter the senior students at the Harvard Veterinary School be invited to the meetings of this Association. Carried.

The meeting then adjourned.

AUSTIN PETERS, *Secretary*.

PENNSYLVANIA STATE VETERINARY MEDICAL ASSOCIATION.

The annual meeting of the Pennsylvania State Veterinary Medical Association was held in the hall of the College of

Physicians, Thirteenth and Locust Streets, Philadelphia, W. S. Kooker, presiding. Veterinarians from all parts of the State were present, and the meeting was the most successful in the history of the Association, this being the first time the University of Pennsylvania has taken a prominent part.

The sessions began at 10 o'clock, when the following officers were elected; President, Dr. Horace Hoskins; Vice-Presidents, Dr. Thomas B. Raynor, Dr. R. G. Webster, Dr. Zeno S. Keil; Recording Secretary, Dr. Robert Gladfelter; Corresponding Secretary, Dr. W. H. Ridge; Treasurer, Dr. John R. Hart; Trustees, Dr. W. S. Kooker, Dr. W. L. Zuill, Dr. S. J. J. Harger, Dr. James B. Raynor and Dr. J. Curtis Michener. Dr. R. S. Huidekoper was made an honorary member, and several new members were admitted.

Several committee reports were presented, the most important of which was that of the Committee on Sanitary Science and Police, read by Dr. W. L. Zuill. He gave a description and explanation of the investigations into tuberculosis in cattle, and the effect of tuberculin and preatine in the cure of the disease. The appointment of milk and meat inspectors in this city was also referred to.

The members were entertained at lunch at Boothby's by the University Veterinary Faculty, and at the afternoon session Dr. S. J. J. Harger read an interesting paper on "Laryngotomy," dwelling on the details of the cure for "roaring," so familiar in horses. The disease, the doctor said, was common among trotting and running horses, and Ormonde, the famous English sire, was a victim. Dr. Harger's paper was discussed by the members, who differed as to the merits of the operation and its usefulness for ordinary practitioners.

Dr. Alexander Glass read a paper by Dr. James A. Waugh, of Pittsburg, on "The Veterinarian—Intellectually, Socially and Morally." The paper treated of a number of interesting points, and was earnest in its antagonism to "mushroom" veterinary schools, run for profit, and having no scientific course of instruction.

Dr. W. H. Ridge presented a criticism upon several cases previously reported, and after it had been discussed the Treas-

urer's report was read, showing a balance of \$47.64. The new President made an appropriate speech, and after deciding to hold the semi-annual meeting at Allentown the convention adjourned.

In the evening the Keystone Veterinary Society of this city met, and John S. McKinlay made an address upon "Veterinary Jurisprudence," with special reference to the Law of Warrantee.

CALIFORNIA STATE MEDICAL VETERINARY ASSOCIATION.

The quarterly meeting of the California State Medical Veterinary Association was held at the Baldwin Hotel, Vice-President W. F. Eagan presiding in the absence of President W. E. D. Morrison, of Los Angeles.

The Chairman announced that the following gentlemen are now members of the Association, and in good standing: Thomas Maclay, Petaluma; A. M. McCallum, Sacramento; H. A. Spencer, San Jose; R. T. Whittlesey, Los Angeles; J. Blackington, Los Angeles; Ward B. Rowland, Pasedena; E. E. Pierce, Oakland; W. J. Oliver, Los Angeles; C. Masoero, San Francisco; W. E. Wadams, Santa Clara; C. B. Orvis, Stockton; P. C. Davenport, Santa Rosa; P. P. Parent, Ukiah; Peter Burns, San Francisco; H. F. Spencer, San Jose; R. A. Archibald, Sacramento; D. F. Fox, Salinas, and W. Davidson, San Bernardino.

A letter was received from Mrs. W. H. Woodruff, thanking the Society for sympathy and financial help rendered to her on the occasion of the death of her late husband. There being no papers to be read, a general discussion on subjects of interest to the veterinary profession took place.

The most important topic of the evening was that of the prevalence of glanders in this State. Dr. Maclay, of Petaluma, in a comprehensive address, strongly advocated the necessity of immediate legislation on this and other veterinary subjects. "At present," said he, "if I find a case of glanders and direct the owner of the animal to destroy it, he may or may not regard my instructions. Now there should be a law rendering it imperative that all animals suffering from this

terrible and incurable disorder should be immediately destroyed and the stables and buildings thoroughly disinfected, and an infected area declared of at least a quarter of a mile around where the disease has manifested itself. Until such a law is passed the Board of Supervisors in each county of the State should pass ordinances to enforce these principles."

Dr. Maclay then described the methods in vogue in Glasgow, Scotland, for dealing with all cases of glanders and other contagious diseases. He commented on the terrible fact of the carcasses of glandered horses being thrown in quantities into the Sacramento River, endangering the lives not only of all animals drinking the water, but the health and lives of untold numbers of our fellow creatures. Many people have died in recent years from the effects of glanderial contagion, and, as, owing to the present lax condition of the law dealing with such diseases, glanders is spreading and likely to increase, the speaker strenuously appealed to the members, the press and the public, to take immediate action to nip the threatened danger of an epidemic in the bud.

Dr. Spencer, of San Jose, then spoke of the work done to eradicate this terrible disease in Santa Clara County. He was appointed to the office of County Veterinarian in 1888, and since then has had some sixty glandered horses destroyed, and believes that the disease is pretty well stamped out, yet it becomes necessary for him to be vigilant at all times, for glandered animals are sometimes turned out on pasture among young stock, and it becomes necessary to destroy them. He says that all farmers and horse-breeders are cognizant of the terrible results of having glanders on his place, consequently they are ever on the alert to apprise him if their suspicions are aroused.

Several of the members said there were many glandered horses in San Francisco, and no steps are taken by the authorities to stamp it out. The number of cattle killed every year suffering with anthrax, and the number of milch cows that have tuberculosis, would astonish the public if it were known. A county veterinarian should be specially employed to protect the public. He should be compelled to make a report

every day, and by his vigilance and strict attention to duty, the spread of these infectious and contagious diseases may be checked.

Dr. Maclay again urged upon the members the necessity of having proper sanitary laws passed. Drs. Fox, Burns, McCallum, Orvis, Pierce, Spencer and Egan all testified to the need of proper legislative authority to stamp out the many dreaded diseases of horses, cattle and swine, and testified to the spread of these diseases in the counties of San Joaquin, Santa Barbara, Sacramento, Sonoma, Santa Cruz and Mendocino. It was stated, however, that in those counties where the Supervisors had passed ordinances and appointed county veterinarians the disease had been nearly rooted out, and was far less prevalent than in those counties where no action had been taken by the authorities. The meeting adjourned to the second Wednesday in June.—*Breeder and Sportsman*.

WISCONSIN SOCIETY OF VETERINARY GRADUATES.

The second annual meeting was called to order at the Park Hotel in Madison, March 16th. In the absence of the President, Dr. V. T. Atkinson, whom death had seen fit to call during the past year, the Vice-President, Dr. J. L. Scott, presided. The minutes of the last annual meeting were read and approved.

The officers elected for the ensuing year were as follows: President, J. L. Scott, V.S., Beaver Dam; Vice-President, E. D. Roberts, D.V.S., Janesville; Secretary, G. Ed. Leech, D.V.S., Milwaukee; Treasurer, C. H. Ormond, D.V.S., Milwaukee; Censors, Drs. Roub, White and Kelso.

There were seven new members enrolled also, which shows a good indication of the interest felt in the Society throughout the State.

A lengthy discussion took place concerning the loss of the former President, and the following resolutions were adopted:

Whereas, The Divine Creator has seen fit to call from our ranks our worthy President, Dr. V. S. Atkinson, be it hereby

Resolved, That in the loss of Dr. Atkinson the Society feels keenly this blow, as he was its founder, and one who had not only its interests at heart, but all things tending to elevate the veterinary profession throughout the United States, and it is further

Resolved, That a copy of this resolution be sent to the leading journals, and also recorded in the Secretary's books.

Although this is a new organization there was a lively interest manifested in the welfare of the Society by members present, and there was a hope expressed that all graduates in the State should interest themselves enough in the next meeting, to be held at Madison, on the third Wednesday in August, '92, to be present and help make this one of the best societies in the country.

The following members were appointed to read papers at the next meeting: Dr. Scott, Dr. Wright, Dr. Roberts and Dr. Williams, after which a motion to adjourn was carried.

G. ED. LEECH, *Sec.*

ILLINOIS STATE VETERINARY MEDICAL ASSOCIATION.

The semi-annual meeting of the Illinois State Veterinary Medical Association was held at Peoria, Ills., Feb. 17th, 1892, President S. S. Baker, of Chicago, presiding.

The following members responded to the roll-call: Drs. Jas. Addison, Walter Allen, A. G. Alverson, S. S. Baker, G. Z. Barnes, G. L. Crocker, T. J. Gunning, Jas. McClintock, J. W. Parkinson, S. V. Ramsay, Jno. Scott, N. I. Stringer, H. Thomson, M. Wilson, N. P. Whitmore. J. A. McDonnell, M. D., of Chicago, an honorary member of the Association, was also present.

Minutes of the last meeting were read and approved.

Art. II., Sec. 3 of the by-laws, as revised at last meeting was adopted.

The following gentlemen were proposed for membership: Drs. Clarence Mills (Chic. '90), Mt. Palatine; Geo. Ditewig (Chic. '91), Canton; J. H. Malone (Chic. '91), Henry; W. F. Robinson (Chic. '91), Peoria; C. H. Hartman (Am. '90), Peoria.

On motion by Dr. Stringer, seconded by Dr. Scott, they were unanimously elected by acclamation.

Vice-President S. V. Ramsay taking the chair, Dr. S. S. Baker read his paper on "The Use of Lithium in Veterinary Practice."

A great deal of interest was manifested in the discussion of this paper on account of this drug being a comparatively new remedy in veterinary practice, and by the good results following its use. The various salts of lithium were mentioned, and the citrate chosen as being the one most applicable for veterinary use on account of its being readily dissolved. Its use was advocated in azoturia on account of its having the power of dissolving uric acid, forming a very soluble salt. It is also less irritant to the stomach than the potassium salts generally used, while its diuretic action is the same.

Dr. J. A. McDonnell spoke of the good results following the use of lithium in human medicine, and advocated a more extensive use in veterinary practice.

Adjourned until afternoon.

At the afternoon session, the President called on Dr. Whitmore for his paper on "Azoturia." This paper brought forth a very lengthy discussion, as is usually the case when the subject is mentioned. The use of diuretics in the treatment was thoroughly discussed and favored by many, while others from a theoretical point of view opposed their use on account of the already over-stimulated condition of the kidneys, due to the excess of uric acid, and advocated the use of hot fomentations, the gentle stimulation of other organs, no diuretics, but soothing applications to the irritated kidneys, along with the other general treatment.

A fresh kidney was brought in, and Dr. McDonnell gave a very interesting talk on the histology and physiology of this organ.

The doctor was given a vote of thanks for his endeavors to benefit the Association, for the interest taken in our branch of the profession, and for his earnest work in trying to bring the two branches nearer together.

The President next called on Dr. Crocker for his paper on "Nursing Sick Stock."

Many points were brought out in the discussion relating to the sanitation of the surroundings of our patients, the care necessary in selecting and giving proper food, and to the giving of general directions to be carried out along with medicinal treatment.

Dr. Alverson then read a paper on "Interesting Post-mortems," and was followed by Dr. Jno. Scott on the report of two cases of "Sciatica."

Two of the essayists being unable to attend, the President called for an impromptu programme.

Accounts were given by different members of unusual cases occurring in their practice, the results of certain forms of treatment, and the outcome of rare cases.

A motion by Dr. Stringer, seconded by Dr. Thomas, was made to have the chair appoint a committee, consisting of members from different parts of the State, to make out a "fee bill," and report at next meeting.

After a good deal of discussion regarding the practicability of this plan, the motion was carried and the following committee appointed: Drs. Nattress, Ramsay, Scott, Gunning, Wilson, Allen, Alverson, Thomson, Whitmore and Addison.

Bills to the amount of \$19.23 for postage, stationery, programmes, etc., were audited and ordered paid.

The Treasurer's report showed a balance of \$33.32 on hand.

A vote of thanks was given the proprietors of the hotel.

The meeting adjourned to meet in Chicago in November at the call of the committee.

MATTHEW WILSON, M.R.C.V.S.,

Recording Secretary.

MARYLAND STATE VETERINARY MEDICAL ASSOCIATION.

A special meeting of the Maryland State Veterinary Medical Association was held on February 5th, 1892, at its rooms, corner Madison Avenue and Orchard Street, Baltimore, with Dr. Geo. C. Faville, President pro. tem. in the chair.

There were present Drs. Geo. C. Faville, Wm. Dougher-

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ty, T. F. Barron, A. W. Clement, D. R. Hoffman and H. A. Meisner.

The minutes of the previous meeting were read and approved.

The Ambulance Committee reported that they had conferred with Mr. Duvall, the Secretary of the Society for the Prevention of Cruelty to Animals, who informed them that an ambulance and harness could be procured for \$500; also that he thought arrangements could be made with the Adams Express Company for furnishing horses, etc.

Under new business Dr. Dougherty moved that our Secretary report the meetings of this Association in the Baltimore daily papers. Carried.

The proposal of new members being next in order, Dr. Hoffman proposed the name of Dr. G. Allen Jahrman, of Chestertown, Md., whose name was referred to the Board of Censors, to be reported upon at next meeting

Dr. Dougherty delivered an excellent address upon a new form of treatment for chronic shoulder and hip lameness, citing some four or five cases thereof which had been successfully treated.

Adjourned.

The regular monthly and sixth annual meeting of the Maryland State Veterinary Medical Association was called to order at Tierney's Hotel, 205 N. Calvert Street, Baltimore, at 8 P.M. February 18th, 1892, with the President, Dr. W. H. Martenet, in the chair.

The following members responded to roll call: Drs. W. H. Martenet, Wm. Dougherty, Geo. C. Faville, A. W. Clement, T. F. Barron, D. R. Hoffman and H. A. Meisner.

The minutes of the previous meeting were read and approved.

Report of Secretary and Treasurer was read and approved.

Motion was made and carried that Dr. Wm. Dougherty be placed on the Ambulance Committee, which now consists of Drs. A. W. Clement, D. R. Hoffman and Wm. Dougherty.

Dr. Clement withdrew his amendment to Article III., Section 2, and Dr. Geo. Faville made a motion that graduates of the "Veterinary Department of the Baltimore University" be not eligible to membership of this Society. Carried.

Dr. W. H. Martenet then presented an amendment to Article I. of By-Laws, which read as follows: "The meetings of this Society shall be held on the third Thursday of each month." Adopted.

The Board of Censors reported favorably on Dr. Jahrman, and moved that he be accepted as an active member. Carried.

Dr. Geo. C. Faville was appointed essayist for next meeting.

The election of officers resulted as follows: President, Dr. W. H. Martenet; Vice-President, Dr. Geo. C. Faville; Secretary and Treasurer, Dr. H. A. Meisner; Board of Censors, Drs. Wm. Dougherty, T. F. Barron, A. W. Clement, D. R. Hoffman.

Meeting then adjourned to retire to the banquet hall, where the members and a number of invited guests did justice to the bountiful repast which awaited them.

Thus ended the most enjoyable meeting this Society has ever held.

H. A. MEISNER, V.M.D., *Secretary*.

UNITED STATES VETERINARY MEDICAL ASSOCIATION.

The following appointments have been made:

Committee of Arrangements for the Annual Meeting at Boston, 1892: W. H. Hoskins, 12 South 37th Street, Philadelphia, Pa.; J. F. Winchester, Lawrence, Mass.; L. H. Howard, Boston, Mass.

Committee of Arrangements for the Annual and International Meeting at Chicago, 1893: R. S. Huidekoper, M.D., Veterinarian (Alfort), President, 311 West 59th Street, N. Y.; W. L. Williams, V.S., Vice-President, Purdue University, Lafayette, Ind.; W. H. Hoskins, D.V.S., Secretary, 12 South 37th Street, Philadelphia, Pa.; D. E. Salmon, Chief of the Bureau of Animal Industry, Washington, D. C.; A. Liautard, M.D., V.M., American Veterinary College, New York; A. H.

Baker, V.S., Chicago Veterinary College, Chicago; Olof Schwarzkopf, V.M.D., University of Minnesota, Veterinary Department, Minneapolis, Minnesota; J. H. Stickney, M.R. C.V.S., Boston, Mass.; A. W. Clement, V.S., Johns Hopkins University, Baltimore, Md.

ALUMNI ASSOCIATION OF THE AMERICAN VETERINARY COLLEGE.

The fifteenth annual meeting was held in the lecture-room of the college on March 24th, 1892. On roll-call twenty-two graduates of previous years, from different States, responded to their names, and after the admission to membership of the new graduates, thirty-four of them answered to their names, making a total attendance of fifty-six.

The President, Dr. Hoskins, delivered a very interesting address.

The report of the Treasurer showed the Association in better financial condition than in previous years.

A few interesting communications were received from some of the State Secretaries.

The Alumni Trustees reported progress in the efforts to secure a new college building.

Resolutions on the death of Drs. G. Bridges, Frederick Hanshew and J. McGiath were read, and ordered in the minute book.

The election of officers resulted as follows: President, J. E. Ryder, D.V.S.; Vice-President, H. D. Hanson, D.V.S.; Secretary, E. B. Ackerman, D.V.S.; Treasurer, A. J. Dodin, D.V.S.; Librarian, E. J. Nesbitt, D.V.S.

After commencement exercises, a sumptuous dinner at Clark's was enjoyed by the members of the Association, with several members of the Faculty and invited guests. "A royal good time was had; it was the most enjoyable and profitable dinner ever partaken of by the Association. Let another year bring more of the members together. Remember that nothing succeeds like success, and that we do not want to go back of this meeting."

E. B. ACKERMAN, D.V.S., *Secretary.*

CORRESPONDENCE.

PLEURO-PNEUMONIA IN THE UNITED STATES.

Editor of American Veterinary Review :

DEAR SIR,—In your editorial comments in the February REVIEW on the work of the Bureau of Animal Industry, referring to pleuro-pneumonia, you say it is quite certain that this disease can be considered as almost eradicated from the United States, if indeed that object has not already been accomplished. If this is so, all must admit that the Bureau has succeeded in a very difficult task ; in fact, one without a parallel. But this conclusion is, in my opinion, premature.

With your permission I will make the following quotation from your editorial, viz. : "The report of the Secretary of Agriculture, issued October 27, 1891, contains some interesting reading." I agree with you as to the nature of the Secretary's report ; in the face of more recent developments, it is highly interesting. I find in said report, on page 16, referring to the Deptford oxen (the circumstances of which case I presume the veterinary profession is familiar with), the following statement :

"Thanks to our system of identification, these two cases were traced in the manner I have indicated, and in every particular their life history sustained the diagnosis of our inspectors [which was sporadic pleuro-pneumonia], which was, I should say, supported by many leading veterinarians in Great Britain at the time. More recently, I am pleased to say, confirmation of our position in their cases, furnishing a triumphant vindication of our American inspectors, has been offered through the columns of a leading veterinary journal in Great Britain by the man who stands beyond dispute at the head of the veterinary profession in that country."

To make the Secretary's report a little more interesting reading, and the vindication of the inspectors more triumphant, allow me to quote from an article in the *Journal of Comparative Pathology and Therapeutics* for December, 1891, page 333, by J. McFadyean, M.B., B. Cs., F.R.S.E., Royal Veter-

inary College, Edinburgh, a bovine pathologist second to none on pleuro-pneumonia, to whom, along with Professor Whalley, fresh specimens of the lungs of said oxen were submitted for inspection, and who at once pronounced the lesions to be those of contagious pleuro-pneumonia.

After having submitted the sections of the lungs of Deptford oxen to the scrutiny of the members of the Lancashire Veterinary Medical Association, and receiving a unanimous verdict that the specimens exhibited were those of bovine contagious pleuro-pneumonia, Prof. McFadyean concludes with the following:

"But there remains to be mentioned additional evidence of great weight in support of the opinion that the Deptford ox was the subject of pleuro-pneumonia. On the occasion of a visit to the Continent during the past summer, I personally submitted portions of the lungs of this animal to Professors Bangs (Copenhagen), Schutz (Berlin), Johne (Dresden), Csokor (Vienna), Kitt (Munich), and Lupke (Stuttgart), and each of these distinguished pathologists without hesitation declared that the lesions present were those of contagious pleuro-pneumonia (lungenseuche)."

In face of the above facts you and every impartial critic must agree with me in failing to find where the triumphant vindication comes in. My object in thus placing these facts before the readers of the REVIEW is that the veterinary profession, who doubtless are interested, may compare notes and draw their own conclusions.

Yours truly, L. McLEAN, M.R.C.V.S.

NAVICULAR DISEASE.

DEAR SIR.—In the January number of the REVIEW you published a paper read before the Massachusetts Veterinary Association, by W. Bryden, V.S., in regard to which I wish to say a few words.

I have myself quite frequently noticed an apparent sympathetic sensitiveness of some part of the leg when the parts within the horny box were becoming diseased. For example,

in the incipient stages and progress of navicular lameness, and sometimes of corns, there has been a hypersensitive condition of the superior sesamoid ligament, most marked below its bifurcation and just above the fetlock joint. At other times the region of the scapulo-humeral articulation has been affected in a similar manner. That the most frequent causes of navicular lameness are abnormal conditions of the horny box is a fact of the truth of which I am thoroughly satisfied. That in its early stages it yields to proper treatment I have demonstrated also, to my entire satisfaction. Even in well advanced cases, after complete ankylosis of the per-torans tendon with the navicular bone, the lameness can be modified to a remarkable degree.

While I am not prepared to accept all that the author claims, still the subject is well worthy of our close attention.

JOHN HAMLIN,

459 C. Street, Washington, D. C.

A YEARLING BULL COMMITS SODOMY WITH A MAN.

Editor American Veterinary Review:

I find on page 106, Vol. XV., No. 2, of the REVIEW a case reported of the vagina of a cow being perforated by a bull during cohabitation. This seemed strange to me, as it is not in accordance with the laws of nature. However, the following perhaps is unparalleled in history:

About two weeks ago a Mr. Platt, thirty-five years of age, living four miles northwest of Allegan, Allegan Tp. Allegan Co., Michigan, while in his barnyard dropped his trousers for the purpose of stooling, a bull standing near by. As Mr. Platt bent forward in the act of rising the bull leaped upon him, covering him as he would a cow, the bull's penis entering the man's rectum, penetrating the bowels for about eighteen inches.

Mr. Platt lived four days, dying in terrible agony.

While this may seem incredible to many, nevertheless it is true, and can be vouched for by many, among whom are Mr. Frank Pound and Mr. B. Peabody, of Allegan, Mich.

Yours truly, L. L. CONKEY.

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J. POE, V.S., Knoxville, Tenn.